

Military lifeblood

FUEL



Story and photos
by Grant Sattler

Forward Engineer Support Team bringing fuel distribution system back to life at former Iraqi airbase

Fuel is the lifeblood of any modern military installation.

Bringing the fuel distribution system back to life at the former Iraqi airbase known as Balad Southeast, site of Logistical Staging Area Anaconda, is the aim of a \$4.5 million contract proposal developed by the Forward Engineer Support Team - Augmentation there.

Environmental Specialist Tammie Stouter, a member of Combined Joint Task Force - 7 FES-T-A, has been working with Maj. Daniel Lamb, from the Support Operations Plans section of Headquarters, Headquarters Company, 3rd Combat Support Command, to get the looted fuel bunkers on the installation and a bulk fuel storage point outside the wire, back in operation.

Lamb, a full-time officer from the Iowa National Guard, is coordinating the needs of the user for the project.

Each of the nine independent fuel bunkers has three large tanks and a smaller tank for a total fuel capacity of more than 105,000 gallons each, for almost a million gallons capacity for fuel storage on LSA Anaconda, the major said.

About seven miles away is a bulk storage facility where refineries would deliver fuel, and the Iraqi Air Force would load to truck it onto the base.

There are a dozen soil-covered, concrete-encased steel tanks set up in two sections, each with a capacity of approximately 132,000 gallons, for 1.5 million gallons storage. The tanks are in good shape, Lamb said. However, there was considerable loss to the pumping systems from looters.

Stouter said Coalition Forces found as-built drawings and design diagrams on the base that have been especially helpful in determining the functioning of the systems. "The fuel distribution system was built



Tammie Stouter, with the Combined Joint Task Force-7 Forward Engineer Support Team Augmentation, looks at a gauge inside a fuel bunker on the former Iraqi airbase.

by Yugoslavians in the early 1980's," Stouter said. "But all the documentation is in English. I'm really surprised that under the previous regime that they would want to have anything in English."

The fuel bunkers are essentially fuel storage and filtration systems housed in bomb resistant shelters. Each bunker provided fuel to a set of four large concrete aircraft hangers linked by short taxiways to the runway. The fuel bunker systems were designed to feed fuel directly inside the hangers, allowing fighter aircraft to be refueled from hydrants using hoses and pump carts that would be brought inside the shelters. U.S. Army aviation, however, does not follow the practice of refueling inside enclosed spaces for safety reasons, Lamb said.

The large fuel bunkers are most readily distinguished from concrete hangars and aircraft and equipment revetments by the presence of multiple



Fuel bunkers on the former Iraqi airbase are being brought back to use.

lightning rods.

Despite some looting, the pumping and filtration systems on the base are still largely intact. "It's still in good condition, but you can see where they've tried to take the lights, here and there a pump is missing, or an electric motor," Stouter said. "We can still get parts."

Lamb said the tanks were made in Yugoslavia, but many of the other components are of German and French manufacture.

Stouter, who has worked on projects for the Defense Energy Support Command in Europe, said, "We've used some of these same brands in fuel systems in Germany."

Nevertheless, Stouter said there are differences in facilities in Germany and those in Iraq, particularly involving life safety standards.

Improvements to the life safety aspects of the fuel bunkers are part of the plan, she said. "We're having them install a fire suppression system. There is one here, but we are not sure it is a viable system."

Additionally, the ventilation and exhaust systems will be tested and upgraded, if necessary, to meet current Stateside standards. "In some areas there were no pumps to circulate fresh air, just vents, so that's something we really have to address," she said.

Some wiring of the electronically monitored, gauged, and switched systems has been looted, but wiring diagrams are still on hand to make their repair easier, Stouter said.

Because looters did not break the integrity of the fuel distribution system's piping, it is possible that the fuel in the bunkers will be useable to Coalition forces.

"There's fuel in all of these tanks," Stouter said. "We're not sure exactly how much, but we believe they were filled fairly close to the beginning of

the war."

Lamb said the fuel is good, but the Army will have to treat it.

"From the initial testing here on post, the fuel tested out as JP-8, good for ground and aviation use. It has not been deemed suitable, it's just tested out as JP-8. It will have to be filtered and tested again,"

he said. The bottom-drawn fuel sample failed the particulates test because it had been sitting for a while.

The sample off post tested as Jet A-1, Lamb said, which is strictly aviation fuel. And even though it is believed to have been stored for years, it tested fine, he said.

"We can inject it to make it JP-8 by adding fuel system icing inhibitor, corrosive inhibitor, and static dissipater," he said, adding that the capability to do so is in theater.

Stouter said, "The only fuel we expect we can't use is what's in the lines from [the fuel bunkers] to the hangars." She said the plan is to drain and cap the lines, and possibly provide that fuel to surrounding Iraqi villages as heating fuel.

Outside each of the fuel bunkers are two upload points and two download points for tanker trucks, Lamb said. The system allowed the Iraqis to not only fill the bunkers, but to move fuel from one fuel bunker to another. In addition, there is a point for upload of offgrade fuel. "The system is set up very well. It circulates [fuel] continuously and it stays within the system, taking the bottom fuel and whatever gets taken off by the filter separators is dumped off in, for lack of a better term, a slop tank," Lamb said.

That fuel could be used for heating or other low grade purposes, he said.

Once the repair project is awarded to go through each of the systems, replace any missing parts and check for leaks, work is anticipated to be completed within six months, Stouter said. The contract also will call for the assessment of the Al Asad bulk storage and bunkers there for possible repair under a separate contract.

